P or SF
11.3, 16.1 V9

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MATERIAL SAFETY DATA SHEET

(Essentially similar to U.S. Department of Labor Form OSHA-20)
An explanation of the terms used herein may be found in OSHA publication 2265, available from OSHA regional or area offices.
Do Not Duplicate This Form. Request an Original.

I. PRODUCT IDENTIFICATION

PRODUCT Nitrogen (High Pressure Gas)

CHEMICAL NAME	Nitrogen	SYNONYMS	- - -
FORMULA	N_2	CHEMICAL FAMILY	- - -
		MOLECULAR WEIGHT	28.0134

TRADE NAME - - -

II. HAZARDOUS INGREDIENTS

For mixtures of this product request the respective component Material Safety Data Sheets
See Section IX

MATERIAL	Wt (%)	1982 ACGIH TLV-TWA (Units)
Nitrogen	100	Simple asphyxiant

USEPA SF
1288515

III. PHYSICAL DATA

BOILING POINT, 760 mm. Hg	−195.8°C (−320.4°F)	FREEZING POINT	−210°C (−345.8°F)
SPECIFIC GRAVITY (H_2O = 1)	Gas	VAPOR PRESSURE AT 20°C.	Gas
OR DENSITY (air = 1)	0.967	SOLUBILITY IN WATER, % by wt.	Negligible
ERCENT VOLATILES BY VOLUME	100	EVAPORATION RATE (Butyl Acetate = 1)	N/A
APPEARANCE AND ODOR	Colorless, Odorless		

EMERGENCY PHONE NUMBER

IN CASE OF EMERGENCIES involving this material, further information is available at all times at: 304 – 744-3487
For routine information contact your local supplier.

L-1631-A

Union Carbide Corporation requests the users of this product to study this Material Safety Data Sheet (MSDS) and become aware of product hazards and safety information. To promote safe use of this product a user should (1) notify its employees, agents and contractors of the information on this MSDS and any product hazards and safety information, (2) furnish this same information to each of its customers for the product, and (3) request such customers to notify their employees and customers for the product of the same product hazards and safety information.

UNION CARBIDE CORPORATION ☐ LINDE DIVISION
Old Ridgebury Road, Danbury, CT 06817

IV. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE Simple Asphyxiant – (ACGIH – 1982)

EFFECTS OF OVEREXPOSURE AND EMERGENCY AND FIRST AID PROCEDURES

Nitrogen acts as an asphyxiant by displacing oxygen, and may cause atmospheres deficient in oxygen in closed spaces and when ventilation is deficient.

SYMPTOMS OF ASPHYXIA: Headache, breathing and pulse rates increased, difficult breathing, perspiration, dizziness, ringing in ears, lips blue, tremors and weakness, fatigue upon exertion, drowsiness, nausea and vomiting, unconsciousness.

TREATMENT OF ASPHYXIA: Remove from oxygen-deficient atmosphere. If breathing is difficult administer oxygen. If not breathing administer artificial respiration, preferably with simultaneous administration of oxygen. Call a physician. Keep under medical observation for 24 hours if rendered unconscious due to oxygen-deficiency.

V. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (test method)	N/A	AUTOIGNITION TEMPERATURE	N/A

FLAMMABLE LIMITS IN AIR, % by volume	LOWER	UPPER
	N/A	N/A

EXTINGUISHING MEDIA

Nitrogen cannot catch fire. Use media appropriate for surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES

Evacuate all personnel from danger area. Immediately deluge containers with water spray from maximum distance until cool, then move containers away from fire area without risk.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Gas cannot catch fire. Container may rupture due to heat of fire. No part of a container should be subjected to a temperature higher than 52°C (approximately 125°F). Most containers are designed to vent contents when they are exposed to elevated temperature.

VI. REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID
STABLE	STABLE	See Section IX
	X	

INCOMPATIBILITY (materials to avoid)

None currently known

HAZARDOUS DECOMPOSITION PRODUCTS

None

HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID
May Occur	Will not Occur	None currently known.
	X	

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Evacuate all personnel from danger area. Use self-contained breathing apparatus where needed. Shut off leak if without risk. Ventilate area of leak or move leaking container to well-ventilated area. Test area, especially confined areas, for sufficient oxygen content prior to permitting re-entry of personnel.

TE DISPOSAL METHOD

Slowly release into atmosphere. Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with Federal, State and local regulations.

VIII. SPECIAL PROTECTION INFORMATION

RATORY PROTECTION (specify type)
Self-contained breathing apparatus where needed.

NTILATION	LOCAL EXHAUST Preferred
	MECHANICAL (general) Acceptable
	SPECIAL - - - - -
	OTHER - - - - -

OTECTIVE GLOVES
Preferred for cylinder handling.

E PROTECTION
Safety glasses.

HER PROTECTIVE EQUIPMENT
Metatarsal shoes for cylinder handling.

IX. SPECIAL PRECAUTIONS

CAUTION: High pressure gas. Use piping and equipment adequately designed to withstand pressures to be encountered. Can cause rapid suffocation due to oxygen deficiency. Store and use with adequate ventilation. Close valve when not in use and when empty.

TURES: When two or more gases, or liquefied gases are mixed, their hazardous properties may combine to create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an Industrial Hygienist, or other trained person when you make your safety evaluation of the end product. Remember, gases and liquids have properties which can cause serious injury or death.

THER HANDLING AND STORAGE CONDITIONS

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UNION CARBIDE CORPORATION
LINDE DIVISION

GENERAL OFFICES: DANBURY, CT.
OFFICES IN PRINCIPAL CITIES

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